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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,715	07/16/2003	Jiang Ji		9585
2101	7590	04/17/2006		
BROMBERG & SUNSTEIN LLP 125 SUMMER STREET BOSTON, MA 02110-1618				
			EXAMINER FORTUNA, ANA M	
			ART UNIT 1723	PAPER NUMBER

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/620,715

Applicant(s)

JI, JIANG

Examiner

Ana M. Fortuna

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claims 1-7, 9 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The term “covalently bonded” or “covalent bond”, in claim 1 as amended, has not been provided in the specification or claims, and therefore constitutes a “new matter”.
2. The rejection of claims 1-9, and restriction of claims 10-16 in paper of 10/3/05 is maintained.
3. The text of those sections of Title 35, U.S. 102 and 103 Code not included in this action can be found in a prior Office action of 10/03/05.

***Response to Arguments***

4. Applicant's arguments with respect to claim 1(amended) have been considered but are moot in view of the new ground(s) of rejection. The claims are newly rejected based on new matter, as discussed above. The rejection of record is maintained. Applicant in addition to the “covalently bonded” limitation also includes burst pressure and pure water permeability. The membrane of US 5,914,039 is disclosed as yielding a permeability of 23 FGD/psi (see column 8, lines 54-57); has a pore size within the microfiltration range (column 8, lines 38-39); and the membrane includes layers (formed on the braid or support) made of the same polymer (column 8, lines 31-34), the inner

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layers inherently corrects defects on the support and constitute an adhesive layer to the subsequent layers. The burst pressure is not specified; however, for a membrane made from the same hydrophilic-hydrophobic polymer solution on the same substrate, and producing the same pore size, are expected to have the same properties. Reference '039 treats deionized water at a pressure of 200Kpa (29psi) (see column 123, claim 8), which indicates the membrane resistant to pressures within 10- 500 psi.

Furthermore, applicant argues formation of a "distinct" middle layer of his membrane. The term is not in the claim, and claim 3 is directed to a middle layer made from the same polymer as to the final layer, therefore, there is not substantial distinction between the layers in the present invention and the layers of reference '039. The rejection of record is maintained.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

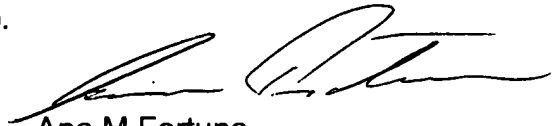
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patents 3,556,305 is cited as teaching providing an adhesive layer on a support to correct defects prior to coating with a further layer on polymer; 4,941,976 teaches crosslinking membrane layer to a polyester backing. 4,839,203 teach multiple coatings to eliminate defects. Additional references teach production of covalent bond to support a layer of membrane on a support.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana M. Fortuna whose telephone number is (571) 272-1141. The examiner can normally be reached on 9:30-6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Ana M Fortuna', is positioned above the printed name.

Ana M Fortuna  
Primary Examiner  
Art Unit 1723

AF  
April 13, 2006